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REMARKS

Claims 1-20 have been canceled. Thus, claims 21 - 57 remain pending in the present application. No new matter has been added. In view of the following remarks, it is respectfully submitted that all of the presently pending claims are in condition for allowance.

The Examiner has objected claim 41 as missing from the listing of the claims. 9/18/08 Office Action, p. 2. A listing of current claims, including claim 41, is attached herewith. Thus, it is respectfully submitted that this objection should be withdrawn.

Claims 21 - 22, 24 - 34, 36 - 46 and 48 - 57 stand rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 6,955,677 to Dahnert ("Dahnert"). 9/18/08 Office Action, p. 2.

Claim 21 recites a method for fixing bone comprising "providing a bone plate configured and dimensioned for application to a patient's bone, the plate having an upper surface, a lower surface and at least one opening extending from the upper surface to the lower surface, the opening defining a first axis substantially perpendicular to the upper surface and the opening, *the opening provided with non-thread protrusions configured and dimensioned to have the same pitch and mate with the threads on a bone screw head*" and "applying the bone plate to a patient's bone" in combination with "inserting a bone screw through the opening in the bone plate at a selected, variable angle of rotation relative to the first axis, the bone screw having a threaded head portion, the threaded head portion having a double entry thread" and "tightening the bone screw such that the threaded head portion of the screw mates with one or more of the protrusions of the inner surface of the opening in the bone plate to lock the screw to the plate at the selected angle relative to the first axis."

In contrast, Dahner discloses an opening including a matrix of protrusions that are tappable via threads of a bone screw that is inserted therethrough. The bone screw does not mate with the protrusions via corresponding threads with the same pitch. Instead, the threading of the bone screw of Dahner taps the protrusions, forming a corresponding thread in the protrusions. Specifically, Dahner describes a tappable contact region 85 of a fastener receiving member 60 that is structured such that it can be tapped by a second thread 51 of head section 40 of a fastener

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10. *Dahners*, col. 7, ll. 1 - 7. The tappable region 85 may include a matrix of protrusions 87 and interstices 89 between protrusions 87 that extend from an inside surface 81. *Id.* at col. 7, ll. 20 - 23. Dahner teaches that the protrusions 87 of tappable region 85 are formed of a material suitable for tapping such that user is able to manipulate second thread 51 "to form, in effect, a custom internal thread in contact region 85 sufficient to maintain fastener 10 in an arbitrary orientation." *Id.* at col. 7, ll. 7 - 12 and 32 - 24. In other words, the protrusions 87 are not formed with a pitch that corresponds to the thread 51, but rather, the protrusions 87 are cut by the thread 51 during insertion of the fastener 10 such that the protrusions 87 of contact region 85 can mate with the bone fastener 10.

The Examiner notes that Dahners discloses isolated non-thread protrusions in the aperture of the bone plate that are configured and dimensioned to have the same pitch and mate with the threads on the bone screw head wherein the protrusions can be in the form of pegs, bristles or tines or "spikes." *9/18/08 Office Action*, p. 3. However, it is respectfully submitted that the Examiner does not point to any portion of Dahners that describes that protrusions 87 are configured to include the same pitch as the thread 51. The Examiner only notes that the protrusions 87 may be pegs, bristles, tine or spikes. It is respectfully submitted that the form of the protrusion 87, whether a peg, bristle, tine or spike does not determine that the protrusions 87 are configured at a specific pitch - i.e., a predetermined distance from one another, the distance corresponding to the width of the thread 51. Indeed, if the protrusions 87 were configured with the same pitch as the thread 51 of fastener 10 to mate with the head 40, the thread 51 would necessarily engage the contact region 85 between protrusions 87 positioned longitudinally adjacent to one another such that the contact region 85 would have no reason to be tappable. Thus, it is respectfully submitted that the protrusions 87 are not configured and dimensioned to have the same pitch and mate with the threads of fastener 10.

Therefore, it is respectfully submitted that Dahner does not show or suggest an "*opening provided with non-thread protrusions configured and dimensioned to have the same pitch and mate with the threads on a bone screw head,*" as recited in claim 21. Accordingly, it is respectfully submitted that claim 21 is not rendered obvious by Dahners and that the rejection of this claim should be withdrawn. Because claims 22, 24 - 33 and 55 depend from and include all of the limitations of claim 21, it is respectfully submitted that these claims are also allowable.

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Similarly, claim 34 recites a method of fixing bone whereby a fixation device having at least one opening is secured to a patient's bone using a threaded bone engaging member, the method comprising "applying the fixation device to the patient's bone" and "selecting an angle of orientation of the bone engaging member relative to the fixation device" in combination with "threading the bone engaging member through the opening at the selected angle of orientation with respect to the fixation device" and "threading a double-entry threaded head of the bone engaging member onto non-thread protrusions formed on an inner surface of the opening, *the protrusions configured and dimensioned to have the same pitch and mate with the double-entry threads for the head of the bone engaging member at the selected angle of orientation*" along with "tightening the bone engaging member to rigidly lock the bone engaging member at the selected angle of orientation with respect to the fixation device without using any additional, separate components at an interface between the bone engaging member and the fixation device."

For at least the same reason as discussed above in regard to claim 21, it is respectfully submitted that claim 34 is not rendered obvious by Dahners and that the rejection of this claim should be withdrawn. Because claims 36 - 43 and 56 depend from and include all of the limitations of claim 34, it is respectfully submitted that these claims are also allowable.

Claim 44 recites a bone fixation system comprising "a fixation device configured and dimensioned for application to a patient's bone, the fixation device having an upper surface, a lower surface and at least one opening extending from the upper surface to the lower surface, the opening defining a first axis substantially perpendicular to the upper surface and the opening including a plurality of isolated, non-thread protrusions formed on an inner surface of the opening, *the protrusions configured and dimensioned to have the same pitch and mate with threads on a bone engaging member*" and "a bone engaging member configured and dimensioned for insertion through the opening in the fixation device at a selected angle of orientation relative to the first axis, the bone engaging member having a threaded head portion, the threaded head portion having a double entry; wherein upon tightening of the bone engaging member, the threaded head portion of the bone engaging member mates with one or more protrusions of the inner surface of the fixation device opening to lock the bone engaging member to the plate at the selected angle of orientation relative to the first axis."

For at least the same reason as discussed above in regard to claim 21, it is respectfully

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submitted that claim 44 is not rendered obvious by Dahners and that the rejection of claim 44 should be withdrawn. Because claims 45, 46, 48 - 54 and 57 depend from and include all of the limitations of claim 44, it is respectfully submitted that these claims are also allowable.

Claims 23, 35 and 47 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Dahners in view of U.S. Patent No. 5,360,448 to Thramann ("Thramann"). *9/18/08 Office Action*, p. 3.

It is respectfully submitted that Thramann does not cure the deficiency of Dahners as discussed above in regard to independent claims 21, 34 and 44. Since claims 23, 35 and 47 depend from and include all of the limitations of claims 21, 34 and 44, respectively, it is respectfully submitted that these claims are also allowable and that the rejection of these claims should be withdrawn.

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CONCLUSION

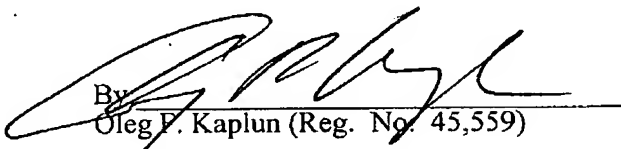
It is therefore respectfully submitted that all of the presently pending claims are allowable. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

Dated:

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By


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